Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matthew H. Mead, Governor

Todd Parfitt, Director

August 26, 2013

Carl Daly
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U.S. Environmental Protection Agency
Region 8
Mailcode 8P-AR
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Submitted electronically via www.regulations.gov

Re: Proposed Partial Approval and Partial Disapproval of Wyoming's Regional Haze State Implementation Plan, Docket ID No. EPA-R08-OAR-2012-0026

Dear Mr. Daly:

The Wyoming Department of Environmental Quality (WDEQ) appreciates the opportunity to comment on the Environmental Protection Agency's (EPA) proposal to partially approve and partially disapprove Wyoming's regional haze State Implementation Plan (SIP) and to impose a Federal Implementation Plan (FIP), 78 Fed. Reg. 34,738 (June 10, 2013) (docket number EPA-R08-OAR-2012). WDEQ strongly opposes EPA's arbitrary and unlawful disapproval of the SIP and imposition of a FIP.

Wyoming's SIP reduces NOx emissions by more than 63,000 tons, while the FIP adds 7,000 tons in additional reductions. But, the FIP requires Wyoming sources to expend $1.5 billion in additional costs on top of the nearly $1 billion in costs Wyoming has already imposed on industry. *See* Ex. 9. In exchange for these increased costs, EPA's FIP does not deliver a perceptible improvement in visibility over the SIP.

In an attempt to show the increased costs will yield a benefit, EPA sums together multiple non-perceptible improvements to create the appearance of perceptible improvement. EPA's aggregation is akin to concluding that because it rained one inch in

ten different places, it must have rained ten inches in all ten different places. Such flimsy logic should not be the basis for disapproving the State's SIP and forcing Wyoming sources to expend an additional $1.5 billion on needless controls.

WDEQ encourages EPA to approve the SIP and rescind the proposed FIP for, among others, the following reasons:

- Wyoming's SIP significantly improves visibility, but at a substantially lower cost than EPA's proposed FIP;
- Wyoming's BART analyses and reasonable progress determinations comply with the Clean Air Act, Regional Haze Rule, and BART Guidelines;
- EPA mistakenly applied the standard of review for SIPs;
- EPA's reasons for disapproving the SIP lack legal and factual support;
- EPA's proposal treats Wyoming differently than other states;
- EPA's proposed FIP unlawfully tramples state judicial processes;
- EPA inadequately explained its BART analyses in the proposed FIP; and
- EPA invalidly promulgated the proposed FIP.

WDEQ submitted comments on EPA's previous proposal to partially disapprove the SIP and impose a FIP on August 3, 2012. Those comments are attached to this letter as Exhibit 1 and incorporated herein to the extent not inconsistent with these comments.

I. EPA's Sham Approach to the Wyoming SIP.

On January 7, 2011, WDEQ submitted Wyoming's Regional Haze SIP to EPA. It proposed nitrogen oxide and particulate matter emissions reductions of roughly 63,000 tons and 4,000 tons, respectively. WDEQ is aware of no other state to propose such substantial emission reductions for the regional haze program. Achieving those emissions reductions will cost Wyoming sources approximately $1 billion. *See, e.g.*, Ex. 9.

As it had on other SIPs, EPA neglected to act on Wyoming's SIP, and as a result exposed itself to liability for violating Section 110(k) of the Clean Air Act. *See* 42 U.S.C. § 7410(k)(2), (3) (setting deadlines for EPA action on SIPs). Wyoming could have sued EPA for failing to take action on Wyoming's SIP, but in the spirit of cooperation, elected not to. Instead, special interest groups sued EPA for its failure to comply with the Act. *See* Compl., *WildEarth Guardians v. Jackson*, No. 1:11-cv-00001-CMA-MEH (D. Colo. Jan. 2, 2011). Wyoming did not participate in this litigation for two reasons: First, Wyoming was not aware of the litigation until EPA published the proposed consent decree, 76 Fed. Reg. 34983 (June 15, 2011); and, second, EPA has repeatedly opposed state attempts to participate in litigation that impacts the processing of SIPs, *see, e.g.*, Def. Opp. to North Dakota's Motion to Intervene, *WildEarth Guardians v. Jackson*, No. 4:09-CV-02453-CW (N.D. Cal. Oct. 20, 2011).

The special interest groups' litigation, in turn, has driven EPA's approach to Wyoming's SIP. The litigation has established arbitrary deadlines for EPA to act on Wyoming's SIP, which EPA and the special interest groups have repeatedly extended for their convenience. Not once has EPA consulted the State on these deadlines. More troubling, through settlement of that litigation, EPA has committed to particular courses of action on Wyoming's SIP. As set forth more completely below, EPA has cut Wyoming out of the cooperative federalism Congress intended to guide the regional haze program. This dubious approach to implementing the Clean Air Act harms states.

The unprecedented influence the special interest groups have exerted over EPA's treatment of Wyoming's SIP, coupled with EPA's effort to conceal its communications with those groups, lead a reasonable observe to seriously question the objectivity of EPA's proposed action on Wyoming's SIP.

A. Sue-and-Settle Regulation

EPA quickly entered into a settlement agreement to resolve the special interest groups' litigation, rather than defend its actions and honor Wyoming's patience with EPA's inaction. In settling the litigation, EPA agreed to take final action on Wyoming's SIP by April 15, 2012. Consent Decree, *WildEarth Guardians v. Jackson*, No. 1:11-cv-00001-CMA-MEH, at 4, ¶ 6 (D. Colo. Sept. 27, 2011) (*WildEarth Guardians*). Recognizing that it still could not meet its statutory obligation to act on Wyoming's SIP, EPA persuaded the special interest groups to extend that deadline thirty days to May 15,

2012. Stip. to Extend Four Deadlines in Consent Decree, at 3, ¶ 6, *WildEarth Guardians*, (D. Colo. Jan. 10, 2012).

On June 2, 2012, eighteen months after Wyoming submitted its SIP, EPA proposed to partially approve and partially disapprove the SIP. 77 Fed. Reg. 33022. But, as a result of EPA's unlawfully delayed action, Wyoming's SIP became complete by operation of law. *See* 42 U.S.C. § 7410(k)(1)(B). Accordingly, EPA cannot now propose to disapprove Wyoming's SIP on the grounds that it lacks information. To do otherwise is to render Section 110(k)(1)(B) meaningless.

Nonetheless, in its 2012 proposal EPA alleged specious technical defects in the SIP and proposed to replace the SIP with a FIP that would cost Wyoming sources $300 million more than the SIP. *See* Ex. 9. In exchange for those increased costs, the FIP would deliver no perceptible improvement in visibility over Wyoming's SIP. WDEQ accordingly submitted extensive comments explaining why EPA was wrong to propose disapproving Wyoming's SIP. *See* Letter from John V. Corra, Director, Wyoming Dept. of Envtl. Quality, to Carl Daly, Air Program Director, EPA Region 8 (Aug. 3, 2012).

The special interest groups with whom EPA had entered into a consent decree dictating EPA action on Wyoming's SIP also submitted extensive comments. They argued that "the regional haze program provides environmental, public health, and economic benefits that far outweigh *any* costs." Letter from WildEarth Guardians, et al., to Carl Daly, Air Program Director, EPA Region 8, at 6 (Aug. 2, 2012) (emphasis added). Accordingly, the groups claimed that EPA had not gone far enough in disapproving Wyoming's SIP and that EPA should take more aggressive action. *See, e.g., id.* at 3. As explained below, EPA appears to have bought into the idea that imperceptible visibility improvements should be required irrespective of costs, even though the law provides otherwise.

Two months after the period for commenting on EPA's 2012 proposal closed, EPA and the special interest groups again modified the consent decree to allow EPA additional time to take action on Wyoming's SIP. *See* Stip. to Extend Deadline in Consent Decree., *WildEarth Guardians* (D. Colo. Oct. 3, 2012). Then, two months after extending the deadline for action on Wyoming's SIP, EPA asked the court to again extend EPA's deadline, this time until September 27, 2013. Def. Unopposed Mot. to Modify Two Deadlines in Consent Decree, at 1, *WildEarth Guardians* (Dec. 10, 2012). As grounds for the request, EPA cited the special interest groups' comments, which EPA

asserted "necessitate[d] re-proposal of the rule." *Id.* at 3-4. The court, in turn, granted EPA's request. Order to Modify Consent Decree, *WildEarth Guardians* (Dec. 13, 2012).

Even after extending its deadline to take action on Wyoming's SIP three times, EPA still needed more time. So, on March 25, 2013, EPA and the special interest groups again agreed to extend EPA's deadline for action on Wyoming's SIP. Stip. to Extend Deadlines in Consent Decree, *WildEarth Guardians* (March 25, 2013) (extending deadline until Nov. 21, 2013). Seemingly as a condition for obtaining the special interests groups' consent to the extension, EPA ostensibly agreed to a timetable for Wyoming sources to install emission controls faster than what Wyoming proposed. *Compare id.* at 2, ¶ 6 ("EPA will propose to determine, for each source subject to BART, the period of time for BART compliance that is as expeditious as practicable"), *with* 78 Fed. Reg. at 34778 ("We propose that PacifiCorp meet our proposed emission limit ... as expeditiously as practicable, but no later than five years after EPA finalizes action"). Had Wyoming known when EPA proposed the consent decree in 2011 that EPA would commit to a particular course action on Wyoming's SIP, rather than just a date for taking some unspecified action, Wyoming would have sought to intervene in the litigation.

B. Hiding the Coordination

In light of EPA's apparent coordination with the special interest groups and the particular influence those groups seemed to be exerting over EPA's regional haze program, Wyoming and eleven other states submitted to EPA a Freedom of Information Act request seeking communications between EPA and the special interest groups related to EPA action on regional haze SIPs. *See* Letter from P. Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General, to FOIA Officer, EPA (Feb. 6, 2013) (FOIA Request) (Exhibit 2). EPA denied the states' public records request on the ground that the states' fee waiver request was invalid because the states "have not expressed a specific intent to disseminate the information to the public." Letter from Larry F. Gottesman, National FOIA Office, EPA, to Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General (Feb. 22, 2013) (Exhibit 3). *But see* FOIA Request, at 5-9 (Feb. 6, 2013) (describing in detail the states' intent to disseminate the information to the public).

The states appealed that plainly erroneous decision. *See* Letter from P. Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General, to National FOIA Officer, EPA (March 15, 2013) (Exhibit 4). On May 2, 2013, EPA's Office of

General Counsel informed the states that it needed "a brief extension of time"—until May 15, 2013—to respond to the states' appeal. Electronic mail from Lynn Kelly, Attorney-Advisor, EPA Office of General Counsel, to P. Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General (Exhibit 5). Two weeks later, EPA again informed the states that it needed more time to review the appeal, promising a decision by May 31, 2013. Electronic mail from Lynn Kelly, Attorney-Advisor, EPA Office of General Counsel, to P. Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General (May 15, 2013) (Exhibit 6).

On that date, EPA denied the states' FOIA request, claiming the states' request "fails to adequately describe the records sought[.]" Letter from Kevin M. Miller, Assistant General Counsel, EPA Office of General Counsel, to P. Clayton Eubanks, Deputy Solicitor General, Office of Oklahoma Attorney General, at 1 (May 31, 2013) (Exhibit 7). *But see* FOIA Request, at 1-3 (describing in detail the records sought). In the face of EPA's blatant attempts to frustrate the states' right to access public records directly related to matters of great importance to the states and the public, the states sued EPA in federal court. Compl., *Oklahoma v. EPA*, No. 5:13-cv-00726-M (W.D. Okla. July 16, 2013) (Exhibit 8).

In related litigation seeking the documents that the states requested, as well as others, a federal judge has questioned EPA's truthfulness and concluded "that leaders in EPA may have purposefully attempted to skirt disclosure under the FOIA." Mem. Op., at 13, *Landmark Legal Found. v. EPA*, No. 12-1726 (D.D.C. Aug. 14, 2013). One cannot help but to similarly question EPA's honesty and wonder what EPA is trying to hide.

C. EPA's Newly Found Urgency to Act on Wyoming's SIP

After dragging its feet for years, EPA planned to rush its new proposal through the process. EPA proposed to have only one public hearing on its new and dramatically revised proposal to impose a FIP costing Wyoming sources $1.5 billion more than Wyoming's SIP, costs that would ultimately trickle down to electricity ratepayers across the Mountain West. 77 Fed. Reg. 34738. EPA proposed to hold that hearing just ten days after providing public notice of its new, revised proposal for Wyoming. *Id.* Not only did EPA's rushed hearing process violate EPA's own rules, as explained more fully below, but it also allowed WDEQ and the public a woefully inadequate amount of time to read and comprehend a lengthy, highly technical document that departed substantially from

EPA's proposal the year before. Notably, EPA's new proposal substantially incorporated the special interest groups' comments, but ignored WDEQ's comments.

Recognizing the problems with EPA's proposed expedited process, WDEQ and Governor Mead requested that EPA defer its hearing until sixty days after the date EPA first released its proposal, with an additional thirty days of comment after the hearing. *See, e.g.*, Letter from Todd Parfitt, Director, WDEQ, to Shaun McGrath, Region 8 Administrator, EPA (June 14, 2013). Although EPA agreed to hold two additional public hearings and provide an additional thirty days for public comment, EPA did not provide the time for public participation that Wyoming requested, evidently because EPA wanted to meet the deadline for final action it established with the special interest groups. Thus, while EPA did not hesitate to extend that deadline on multiple occasions when it benefitted EPA and the special interest groups, EPA refused to provide the additional time Wyoming requested for the benefit of the State.

II. Wyoming's SIP Complies with the Clean Air Act and Regional Haze Rule.

The Clean Air Act and the Regional Haze Rule provide substantial discretion to states to determine how best to make reasonable progress toward achieving natural visibility conditions in designated areas. Reasonable progress—the touchstone of the regional haze program—is a flexible benchmark. *See* 42 U.S.C. § 7491(g)(1). In recognition of this overarching flexibility and the need to account for local conditions, Congress directed EPA to allow states discretion in how they determine the best available retrofit technology (BART) for improving visibility. *Id.* § 7491(b)(2)(A); *Am. Corn Grower Ass'n v. EPA*, 291 F.3d 1, 8 (D.C. Cir. 2002) ("Congress intended the states to decide which sources impair visibility and what BART controls should apply to those source."); *see also* 40 C.F.R. § 51.308(e)(1)(ii)(A).

Against this backdrop of state discretion, the Clean Air Act requires SIPs to include: generally, "such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal [of natural visibility conditions in national parks and wilderness areas]," 42 U.S.C. § 7491(b)(2); "a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal," *id.* § 7491(b)(2)(B); and more specifically, a plan for particular sources to "procure, install, and operate, as expeditiously as practicable (and maintain thereafter) the best available retrofit technology," *id.* § 7491(b)(2)(A).

EPA's 1999 Regional Haze Rule, promulgated two decades after the 1979 deadline Congress established, explains to the states how to meet these requirements. *See* 40 C.F.R. § 51.308. The Rule requires SIPs to contain, in pertinent part: reasonable progress goals, baseline and natural visibility conditions, a long term strategy for regional haze, a monitoring strategy, and BART emission limitations and compliance schedules for eligible BART sources. *Id.* § 51.308(d), (e).

To meet the BART requirement, the Rule requires SIPs to: first, list all BART-eligible sources in the state, *id.* § 51.308(e)(1)(i); second, make a BART determination for each BART-eligible source that may reasonably be anticipated to contribute to visibility impairment in Class I areas, known as "subject-to-BART sources," *id.* § 51.308(e)(1)(ii); and third, for subject-to-BART sources, determine "the best system of continuous emission control technology available and associated emissions reductions achievable[.]"*Id.* § 51.308(e)(1)(ii)(A).

To make this BART determination, the SIP must consider the following factors: (1) available emission control technology, (2) costs of compliance, (3) energy and non-air quality impacts of compliance, (4) pollution control equipment already in use at the source, (5) remaining useful life of the source, and (6) the degree of visibility improvement reasonably anticipated to result from the technology. *Id.*; *see also* 42 U.S.C. § 7491(g)(2) (defining BART). Neither the Act nor the Rule dictates how a SIP weighs these BART factors. *See* 42 U.S.C. § 7491(g)(2); § 51.308(e)(1)(ii)(A). Consistent with the Rule, EPA's BART Guidance provides that states "are free to determine the weight and significance to be assigned to each factor." 40 C.F.R. pt. 51, App. Y, § IV(D)(5) (BART Guidelines).

Wyoming's SIP meets these statutory and regulatory requirements. The SIP contains reasonable progress goals with emissions limitations and compliance schedules for both BART and non-BART sources of visibility impairing pollutants. It provides a long-term strategy for ensuring reasonable progress towards the goal of attaining natural visibility conditions, and sets forth the measures necessary for maintaining that reasonable progress. Wyoming determined BART for each subject-to-BART source based on all five statutory BART factors. The State looked at all five factors in their entirety and weighed them equally, as EPA's Rule and Guidance allows. EPA therefore rightly acknowledges that the State followed the BART process. 78 Fed. Reg. at 34748 ("We find that Wyoming considered all five steps above in its BART determinations").

A. Wyoming Properly Conducted Its BART Cost Analyses.

EPA's BART Guidelines direct states to: (1) identify emissions units being controlled; (2) identify design parameters for emission controls; and (3) develop cost estimates based on those design parameters. 40 C.F.R. pt. 51, App. Y, § IV(D)(4)(a)(1) (BART Guidelines). The cost "analysis should provide a clear summary list of equipment and the associated control costs." *Id.* § IV(D)(4)(a)(2). Cost estimates "should be documented, either with data supplied by an equipment vendor (i.e., budget estimates or bids) or by a referenced source[.]"*Id.* § IV(D)(4)(a)(5). The Guidelines prefer that cost estimates "be based on the OAQPS Control Cost Manual, *where possible*," but the estimates "should also *take into account any site-specific design or other conditions* ... that affect the cost of a particular BART technology option." *Id.* (emphases added).

Wyoming's BART cost analyses comply with these requirements. The SIP identifies emissions units being controlled, identifies design parameters for emission controls, and presents cost estimates based on those parameters. *See* SIP, at 89-109; *see also* SIP Attachment A. Consistent with the BART Guidelines, the SIP takes into account site-specific conditions that affect the costs of particular BART technologies. *See generally* SIP Attachment A.

Use of the BART guidelines is only required for sources located at electric generating facilities with a total capacity greater than 750 megawatts. *See* 40 C.F.R. § 51.308(e)(ii)(B). Only three power plants in Wyoming met these criteria: Basin Electric's Laramie River Station, PacifiCorp's Jim Bridger, and PacifiCorp's Dave Johnston plants. For consistency, and as a matter of state discretion, Wyoming went above and beyond the requirements by following the five step process for all BART sources, not solely the three aforementioned large electric generating facilities. EPA should commend Wyoming for taking this approach, not use it as an excuse for invalidating the SIP.

B. Wyoming Correctly Computed Baseline NOx Emissions

To establish baseline emissions for BART visibility modeling, EPA suggests that states use maximum 24-hour average emissions for a given source. BART Guidelines, § III(A)(3)(2). States then determine emissions for individual pollution controls as a percentage of the pre-control, baseline emissions. But, at the same time, EPA states that emission limits in BART permits should be based on a 30-day averaging period. EPA

does not explain how to establish a 30-day average permit limit for a control option that was modeled at a 24-hour emission rate.

The State, recognizing that BART emission limits would be based on 30-day averages, determined pre-control and post-control emissions for BART modeling that matched the averaging periods for the BART permit limits. As a result, the modeled visibility improvements associated with each possible control option directly related to the permit limits that the State considered. Additionally, because the per ton cost of pollutant reduction for the control options also was based on 30-day emission levels, the State's use of the 30-day average emissions in the modeling further validated the State's approach.

The visibility modeling for Wyoming's SIP showed that the maximum predicted change in visibility at Badlands National Park between LNB controls and SCR for each of the three units at Laramie River Station (LRS) was 0.3 deciviews (dv). Wyoming concluded that the added costs of SCR were not justified because the incremental visibility improvement predicted for SCR as compared to LNB was not perceptible. The results of the EPA's revised modeling for LRS reflect the differences between baseline and intermediate control scenarios that are based on maximum 24-hour emissions and emissions for SCR at a rate (0.05 lb/MMBtu) that is not viable as a 24-hour permit limit because it cannot be continuously achieved on a 24-hour basis. Nowhere in EPA's analysis has EPA demonstrated that application of SCR with a resulting NOx emissions rate of 0.05 lb/MMBtu is continuously achievable on a 24-hour basis. In other words, EPA has assumed a technically infeasible control option for the purpose of overstating its modeling results. As explained in more detail below, EPA also fails to explain why EPA requires a rate of 0.05 lb/MMBtu for Wyoming's SIP, but approved a rate of 0.07 lb/MMBtu for Colorado's SIP.

EPA's use of 24-hour maximum emissions for baseline modeling and a long-term emission rate such as 0.05 lb/MMBtu for modeling SCR significantly overestimates the actual difference in emissions from the baseline versus SCR control scenarios. This overestimation is especially problematic for BART modeling when using the EPA-required CALPUFF model, which is known to significantly over-predict visibility impacts. *See, e.g.*, Jonathan Terhorst & Mark Berkman, *Effect of Coal-Fired Power Generation in a Nearby National Park*, 44 Atmospheric Envt. 2524 (2010).

For example, the highest measured haze during the 20% least impaired days at Bridger Wilderness from 2000 through 2011 was 12.9 inverse mega meters (Mm^{-1}). Of that total, only 0.5 Mm^{-1} was due to nitrate particles, which form from NO_x emissions. The total light extinction of 12.9 Mm^{-1} converts to only 2.5 deciviews (dv), yet miraculously, EPA's CALPUFF modeling for Bridger Wilderness, as reported in the re-proposal, predicts a visibility improvement on the order of one full dv for *each* of the four units at the Jim Bridger power plant for NO_x control only (for baseline versus SCR). Thus, EPA bases its BART determinations on modeling results that are impossible to obtain because EPA's model predicts visibility will improve more than it is actually impaired. In essence, EPA bases its BART determinations on modeling results that are impossible to obtain because EPA's model predicts visibility will improve more than it is actually impaired.

Wyoming concluded that visibility modeling conducted with 24-hour emission rates did not allow for a direct comparison between pollution control costs and permit limits based on 30-day averages. The State therefore took a reasonable approach to the modeling presented in the SIP, and stands by the SIP determinations of BART controls for Wyoming sources. EPA chose to conduct revised visibility modeling and to re-propose a FIP based on a perceived deficiency in Wyoming's modeling. EPA's re-proposal dismisses the State's modeling as "inconsistent with statutory and regulatory requirements." But, rather than explain how the State's approach is in fact inconsistent with the statute and regulations, EPA simply substitutes its technical preferences for the State's.

C. Wyoming's Reasonable Progress Goals and Determinations Are Valid.

As explained above, the Clean Air Act and the Regional Haze Rule require SIPs to set forth goals, expressed in deciviews, that assure "reasonable progress toward meeting the national goal" of "natural visibility conditions [in Class I areas] by the year 2064." 42 U.S.C. § 7491(a)(4), (b); 40 C.F.R. § 51.308(d)(1)(i)(A). The goals "must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period." 40 C.F.R. § 51.308(d)(1). To establish these goals, state must also "[a]nalyze and determine the rate of progress needed to attain natural visibility conditions by the year 2064," by "compar[ing] baseline visibility conditions to natural visibility conditions [in Class I areas] and determin[ing] the uniform rate of visibility

improvement" necessary to achieve natural conditions by 2064. 40 C.F.R. § 51.308(d)(1)(i)(B).

Wyoming's SIP meets these requirements. *See* SIP, at 114-31. The SIP calculates and compares baseline and natural visibility conditions, *id.* at 114-15, analyzes the rate of progress needed to attain natural visibility conditions by 2064, *id.*, and establishes a uniform rate of progress, *id.* Wyoming also ensured improvement in visibility on the most impaired days and no degradation on the least impaired days. *See id.* at 115 (Table 7.2.1). And, most importantly, the SIP establishes reasonable progress goals. *Id.* at 127-31.

The Clean Air Act and the Regional Haze Rule also require states to make reasonable progress determinations for particular sources by "[c]onsider[ing] the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources, and includ[ing] a demonstration showing how these factors were taken into consideration in selecting the goal." 40 C.F.R. § 51.308(d)(1)(i)(A).

Wyoming also met this requirement. The SIP clearly explains how Wyoming considered these factors and identified sources impacting visibility in Class I areas. *See* SIP, at 116-17. Wyoming then explained in its SIP how it applied the factors to each individual source. *See id.* at 117-27. The SIP therefore meets the requirements of the Act and the Rule.

III. EPA's Proposed Partial Disapproval of Wyoming's BART Analyses and Reasonable Progress Determinations Is Arbitrary, Capricious, and Contrary to Law.

EPA proposes to partially disapprove Wyoming's SIP. To support this proposal, EPA sets forth a host of alleged technical glitches in Wyoming's plan. Those allegations are wrong. But even if EPA were correct to claim that Wyoming made technical mistakes, EPA has not shown that Wyoming's determinations were arbitrary or contrary to the Clean Air Act.

In fact, Wyoming's SIP and EPA's proposed FIP achieve substantially similar results. In EPA's view, the key difference between the two plans is that the FIP will reduce NOx reductions by roughly an additional 7,000 tons per year over the 63,000-ton

reduction provided in the SIP. Although those additional reductions will cost Wyoming sources nearly $1.5 billion more in costs, they will not deliver any perceptible improvement in visibility.

A. EPA Misapplied *ADEC*.

Throughout its proposal, EPA claims to have reviewed Wyoming's SIP under a "reasonableness" standard. *See, e.g.*, 78 Fed. Reg. at 34776 ("we do not consider Wyoming's analyses ... to be reasonable"); *see also id.* at 34778. EPA apparently believes that this standard allows EPA to substitute its judgment for the state's whenever EPA generally alleges that the state's conclusions or methods are not reasonable. Yet EPA cites no statutory or regulatory authority to support its malleable application of this "reasonableness" standard of review.

EPA appears to have crafted its flexible reasonableness standard from *Alaska Department of Environmental Conservation v. EPA*, 540 U.S. 461 (2004) (*ADEC*). That case stands for the proposition that EPA has authority to reject a state decision that "is not based on a reasoned analysis[.]" *Id.* at 490 (internal quotation omitted). EPA has misapplied that standard in its proposal to disapprove Wyoming's SIP.

The *ADEC* standard does not allow EPA to disapprove SIPs whenever, in EPA's opinion, some element of the SIP is not reasonable. Instead, EPA must provide SIPs "considerable leeway" and may not "'second guess' state decisions[.]" *ADEC*, at 490 (internal citation omitted). Accordingly, EPA may disapprove a SIP under *ADEC* only by showing that the SIP is arbitrary. *See id.* at 490-91. EPA therefore must defer to the Wyoming's determinations in the SIP, and may not simply substitute its judgment for the State's. And, of course, EPA carries the burdens of production and persuasion to show that the State acted unreasonably in light of the statutes and administrative record. *Id.* at 494.

EPA has failed to carry those burdens in its proposed partial disapproval of Wyoming's regional haze SIP. The administrative record demonstrates that Wyoming's SIP will achieve the statutory goal of reasonable progress. EPA has not shown otherwise. EPA has shown only that if it had crafted the implementation plan in the first instance, it would have done so differently than Wyoming did. But the law does not allow EPA to simply substitute EPA's preferences for the State's. Before EPA can disapprove the SIP,

it must show that the SIP is arbitrary, in light of the statutes and the record, and with consideration for the deference owed the State's determinations.

For example, the only meaningful difference in outcomes between EPA's proposed FIP and the SIP is a roughly five-year period in which EPA's proposed controls will result in lesser emissions, though without a perceptible visibility improvement. Save for this distinction, the SIP and FIP create essentially equal improvements in visibility. EPA does not explain why a reduction in NOx emissions that is more expensive but not more effective at improving visibility is more "reasonable" than the SIP. That lack of explanation renders EPA's proposal arbitrary, and decidedly "unreasonable."

B. EPA's Claim that Wyoming's BART Analyses Include Mistaken Cost Assumptions and Methods Is Erroneous, Arbitrary, and Unlawful.

In its 2012 proposed action on Wyoming's SIP, EPA relied on Wyoming's cost analyses. 78 Fed. Reg. at 34748. But, EPA now takes the opposite approach, generally claiming that it "has identified deficiencies in various cost assumptions and methods" that are "due to a number of errors" Wyoming used in its BART analyses. *Id.* EPA makes the following six claims: (1) Wyoming's SNCR cost analyses underestimated urea usage and cost; (2) Wyoming overestimated the ability of SNCR to reduce NOx; (3) Wyoming underestimated the ability of SCR to reduce NOx; (4) Wyoming overestimated the cost of SCR; (5) Wyoming used incorrect baseline NOx emissions; and (6) Wyoming's cost analyses did not follow the EPA Control Cost Manual. *Id.* EPA's claims lack merit.

EPA devotes all of one page of the *Federal Register* notice to explaining the alleged deficiencies in Wyoming's cost analyses. *See id.* EPA does not make clear which of its general allegations (e.g., failing to follow the Control Cost Manual) apply to which sources. *See id.* Instead, EPA refers to supporting technical memoranda, on the apparent assumption it is WDEQ's responsibility to parse out EPA's grounds for disagreeing with Wyoming's cost analyses for each particular source. Such inadequate explanation is arbitrary. For those claims that EPA has substantiated with adequate specificity to allow response, WDEQ explains below why EPA is wrong.

1. Changes in Urea Prices Are Not a Valid Basis for Disapproving the State's Cost Analyses, and Even If They Were, EPA's Facts Are Mistaken.

EPA asserts that "the BART sources underestimated the cost of selective non-catalytic reduction (SNCR)." *Id.* As support for this conclusion, EPA states that Wyoming underestimated "SNCR reagent (urea) usage and cost." *Id.* EPA does not explain how Wyoming underestimated urea usage. However, EPA asserts that "prices for urea have increased in the last three years" since Wyoming submitted its plan to EPA. *Id.* EPA notes accurately that the "increase in prices [for urea] are not reflected in the Wyoming estimates for SNCR." *Id.*

It's remarkable that EPA would claim that a change in urea prices in the time since Wyoming submitted its SIP somehow invalidates the SIP. The time that has elapsed since Wyoming submitted its plan to EPA is due in large part to EPA's failure to take timely action on Wyoming's plan. EPA does not claim that Wyoming's analyses were invalid when Wyoming submitted its plan in January of 2011. Nor does EPA explain how the change in urea market prices led Wyoming to unreasonable conclusions. Instead, EPA appears to believe that Wyoming and other states must constantly update their BART analyses to account for changing urea market prices up until the date that EPA takes final action on the plan. Under EPA's theory, EPA can hold SIPs hostage, waiting for commodity prices to change, and then disapprove SIPs on that basis alone. Yet, EPA cites no legal basis for this novel theory.

The BART guidelines suggest the opposite is true. The Guidelines expressly acknowledge that "[i]n order to provide certainty in the process," states "need not consider technologies that become available after [the close of the comment period on the state plan]." 40 C.F.R. pt. 51, App. Y, § IV(D)(2)(3). By extension, and in order "to provide certainty in the process," EPA cannot claim that state plans are perpetually subject to invalidation as a result of changing commodity prices.

Notably, the information EPA relied on to conclude that urea market prices have increased is itself outdated. The report EPA cites as support for its urea price claim was completed October 23, 2012, and relied on vendor emails from Fuel Tech and PotashCorp dated October 12, 2012 and October 15, 2012, respectively, to conclude that urea cost approximately $650 per ton. *See* EPA's Revised Cost Analyses for Wyoming Sources, at 7 n.22, n.23. That same report recognizes that "there has been significant

variability in [urea] cost[.]" *Id.* Thus, unsurprisingly, since the date of that report, urea prices have continued to vary significantly, falling by roughly fifty-percent. *See* Potash Corp., Market Data, http://www.potashcorp.com/customers/markets/market_data/prices/ (Aug. 14, 2013). In its revised cost analyses, EPA acknowledges the beginning of the price decrease, pegging urea costs at $450 per ton. *See* EPA's Revised Cost Analyses for Wyoming Sources – Detailed Spreadsheet Supporting Analyses, at *4 (Feb. 11, 2013).

According to the very same vendor EPA relies on to claim that Wyoming underestimated urea prices (PotashCorp), urea prices are today far closer to Wyoming's price assumptions than EPA's, which coincidentally were among the highest prices for urea in the last four years. *See* Potash Corp., Market Data, http://www.potashcorp.com/customers/markets/market_data/prices/ (Aug. 14, 2013). Therefore, even if changes in commodity prices following SIP submission were a valid basis for disapproving SIP analyses that relied on prices at the time of SIP development, EPA is factually mistaken to claim that Wyoming unreasonably underestimated urea prices. In fact, EPA has unreasonably overestimated urea prices by supporting its analysis with an abnormally high price that is not reflective of the current market.

Moreover, even if the State's cost analyses were revised to reflect EPA's unjustifiably high urea prices, the average cost effectiveness of SNCR would still be consistent with the State's original analyses. The SIP reviewed average cost effectiveness values as high as $4,841 dollars per ton of NOx reduced and incremental cost effectiveness values as high as $8,147 dollars per ton of NOx reduced. *See* SIP, Attachment A. The State determined that those costs were reasonable. EPA's average and incremental cost effectiveness numbers for SNCR fall well below these values and agree with the State's original conclusion that the costs of compliance from the application of SNCR to the EGUs were reasonable. Thus, even if the State-analyzed urea costs are adjusted to reflect EPA's urea costs, the average cost effectiveness values remain below $2,600 dollars per ton of NOx reduced and with incremental cost effectiveness values below $5,000 dollars per ton of NOx reduced. *See* Ex. 10. Those values are consistent with the State's original conclusion. It is therefore clear that EPA does not take issue with Wyoming's cost analyses, but rather Wyoming's BART conclusions.

Stated simply, EPA's allegation that Wyoming incorrectly analyzed costs is simply an excuse for EPA to override Wyoming's BART determinations because EPA does not like the result. EPA must therefore explain why Wyoming's ultimate BART determinations run afoul of the law, rather than hold up dubious allegations of technical

deficiencies as window dressing for EPA to take over the role Congress gave to states to make BART determinations.

2. EPA Is Wrong to Claim that Wyoming Overestimated the Ability of SNCR to Reduce NOx.

EPA claims that Wyoming "overestimat[ed] the ability of SNCR to reduce NO_X." 78 Fed. Reg. at 34748. EPA notes, in support, that for the Laramie River Station, "Wyoming significantly overestimated the ability of SNCR to reduce NOx." *Id.* EPA explains that Wyoming "assumed that after the installation of additional controls, SNCR would reduce NOx from 0.23 lb/MMBtu to 0.12 lb/MMBtu (or by roughly 48%)." *Id.* According to EPA, however, "SNCR typically reduces NOx an additional 20 to 30% above combustion controls without excessive NH_3 slip." *Id.*

Yet EPA's own Control Cost Manual claims that "[r]eductions of up to 65% have been reported for some field applications of SNCR in tandem with combustion control equipment such as low NOx burners (LNB)." EPA Air Pollution Control Cost Manual, § 4, 1-3 (6th ed. Jan. 2002). Wyoming's estimate of a 48% reduction was based on SNCR operating in tandem with low NOx burners. Wyoming's estimate is therefore entirely consistent with EPA's control cost manual. In fact, Wyoming's estimates are entirely consistent with demonstrated SNCR effectiveness. One study clearly concluded that "SNCR has the capability of NOx reductions in the range of 30-60%, depending on the specific retrofit application." *See* EPRI, *Cardinal 1 Selective Non-Catalytic Reduction (SNCR) Demonstration Test Program*, at 1-2 (2000) (EPRI Report). That study showed, for example, that a 600 MW unit equipped with LNB could reduce NOx by an amount greater than EPA's "typical" results. *Id.*

To determine the effectiveness of SNCR, Wyoming reviewed past permitting actions, electronic databases (e.g., RBLC Clearinghouse), and commonly available literature to determine whether proposed control alternatives and associated performance levels were reasonable. Consistent with this approach, Wyoming utilized EPA's *AP 42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources* as one source for evaluating SNCR effectiveness. That resource recognizes that "[t]he effectiveness of SNCR depends on the temperature where reagents are injected; mixing of the reagent in the flue gas; residence time of the reagent within the required temperature window; ratio of reagent to NOx; and the sulfur content of the fuel that may create sulfur compounds

that deposit in downstream equipment." AP 42, Vol. I, Ch. 1, § 1.1.4.3, at 1.1-9 (5th ed. 1998).

Stated simply, EPA's own literature, as well as other studies, recognize that SNCR effectiveness is highly contextual and that it can achieve reductions far in excess of Wyoming's estimates. *See id.*; *see also* EPRI Report. However, without explanation, EPA disregards its own position on the contextual nature of SNCR effectiveness, and in turn disregards Wyoming's well reasoned analysis by relying instead on "typical" NOx reductions. 78 Fed. Reg. at 34748. EPA does not explain in its proposal why it now prefers a generic approach to SNCR effectiveness in reducing NOx over its previously expressed recognition that effectiveness depends on a host of facility-specific factors. That lack of explanation indicates arbitrary decision making.

3. EPA's Assertion that Wyoming Underestimated the Ability of SCR to Reduce NOx Is Arbitrary.

EPA claims Wyoming underestimated the ability of SCR to reduce NOx. In support of this argument, EPA explains that "Wyoming assumed that SCR could only achieve a control effectiveness of 0.07 lb/MMBtu." 78 Fed. Reg. at 34748. EPA asserts, instead, "that on an annual basis SCR can achieve emission rates of 0.05 lb/MMBtu or lower." *Id.* EPA cites no legal or factual support for this bare assertion. That failure alone renders EPA's determination arbitrary.

However, EPA further fails to explain why an SCR control effectiveness rate of 0.07 lb/MMBtu is good enough for EPA to approve in another state's SIP, but not in Wyoming's. In Colorado's SIP, EPA approved Colorado's use of a 0.07 lb/MMBtu annual emission rate for SCR at coal-fired power plants because, as EPA explained, that rate "is within the range of actual emission rates demonstrated at similar facilities in EPA's Clean Air Markets Division (CAMD) emission database." 77 Fed. Reg. 76871, 76873 (Dec. 23, 2012). EPA even went so far as to say that an emission rate as low as 0.05 lb/MMBtu can be achieved only "in some cases[.]" *Id.* Yet in its proposed disapproval of Wyoming's SIP, EPA has failed entirely to explain why Wyoming's analyses are so distinct from Colorado's that this disparate treatment is not arbitrary.

4. Wyoming Did Not Overestimate the Costs of SCR.

EPA asserts that Wyoming's site specific cost estimates overstated the costs of installing SCR controls. In support, EPA cites industry reports of installation costs at different facilities during the early-to-mid 2000s. But, EPA does not explain why those industry reports are more reasonable than Wyoming's site-specific estimates of costs for Wyoming sources.

While EPA claims to have "identified a number of flaws in Wyoming's cost analyses for SCR," 78 Fed. Reg. at 34748, EPA identifies only one supposed flaw in Wyoming's cost analyses for SCR. EPA explains that "Wyoming's SCR capital costs on a $/kW basis often exceeded real-world industry costs." *Id.* EPA's use of the word "often" indicates that Wyoming's costs did not *always* exceed real-world industry costs. But, EPA does not adequately explain which costs exceeded real-world costs and which did not.

EPA specifically alleges only that the cost estimates for Dave Johnston Units 3 and 4, Naughton Units 1, 2, and 3, and Wyodak "are in excess of the range of capital costs documented by various studies for actual installations." *Id.* In support, EPA cites "[f]ive industry studies conducted between 2002 and 2007 [that] have reported the installed unit capital cost of SCRs, or the costs actually incurred by owners, to range from $79/kW to $316/kW (2010 dollars)." *Id.* From these studies, EPA concludes that "actual capital costs are much lower than Wyoming's" SCR cost estimates, which range from $415/kW to $531/kW. *Id.*

However, EPA fails to explain why the State was wrong to rely on vendor submitted, engineered, site-specific cost estimates instead of reports of installations at other facilities as along as a decade ago.[1] As noted before, EPA's BART Guidelines not only allow, but encourage states to take into account site-specific conditions that impact the cost of installing emission controls. Until EPA explains why it was unreasonable for

[1] Wyoming's costs of compliance are based on site-specific capital costs, operating costs, and maintenance costs provided by the companies in their applications for a State BART permit. The majority of the costs of compliance, over 50%, is driven by the capital cost to engineer and physically install a SCR system. Such costs must be evaluated on a case-by-case basis in accordance with Appendix Y. Unlike capital costs, variable costs, including reagent usage (ammonia), account only for 2% to 7% of SCR costs.

Wyoming to prefer site-specific, real-world costs over speculative extrapolation of costs incurred at other facilities many years past, EPA cannot lawfully displace the State's judgment simply because EPA prefers one approach over the other.

5. EPA Is Wrong to Claim that Wyoming Incorrectly Modeled Visibility Improvement.

EPA alleges two deficiencies in Wyoming's visibility modeling. First, EPA asserts that Wyoming did not model visibility improvement for SNCR for PacifiCorp's units. 78 Fed. Reg. at 34749. Second, EPA claims Wyoming erroneously modeled emission reductions from multiple pollutants together. *Id.* EPA asserts that as a result of these alleged errors, Wyoming's SIP conflicts with the statutory and regulatory requirement that "states take into consideration 'the degree of visibility improvement which may reasonably be anticipated to result from the use of such technology.'" 78 Fed. Reg. at 34749 (citing 42 U.S.C. § 7491(g)(2) and 40 C.F.R. § 51.308(e)(1)(ii)(A)).

Wyoming modeled both the least and most expensive controls for PacifiCorp's units. Because SNCR is less effective at controlling emissions than SCR, which Wyoming modeled, and more effective than LNB with OFA, which Wyoming also modeled, Wyoming concluded that the modeled impacts of SNCR would fall between the modeled impacts of SCR and LNB with OFA. EPA does not explain why this approach violates the Act or the Regional Haze Rule. Nor does EPA explain why this approach does not reasonably anticipate the degree of visibility improvement that may be attributed to SNCR. In fact, as explained below, EPA used exactly the same approach to modeling for its FIP reasonable progress goals. The difference, however, is that the Rule clearly requires concrete reasonable progress goals; it does not require precise modeling for every control technology.

Wyoming modeled emission reductions from multiple pollutants together because to do otherwise—as EPA suggests Wyoming should—would artificially distort the CALPUFF model. The chemistry underlying the CALPUFF model—in particular how CALPUFF allots ammonia for the formation of visibility impairing particles—depends on the quantity of SO2 emissions. If Wyoming followed EPA's proposal and ignored changes in actual SO2 emissions, the model would create results not representative of reality.

In neither case has EPA shown why these alleged technical errors would render Wyoming's ultimate BART conclusions arbitrary under *ADEC's* standard of review. Until EPA makes that showing, EPA cannot use such alleged technical glitches to open the door for EPA to substitute its BART judgments for the State's.

6. EPA's Claim that Wyoming Failed to Follow the Control Cost Manual Is Mistaken.

EPA further argues that for all control technologies, "Wyoming's source-based cost analyses did not follow the methods set forth in the EPA Control Cost Manual." 78 Fed. Reg. at 34749. EPA sets forth two propositions in support of this claim.

First, EPA cites the Control Cost Manual for the proposition that EPA prefers consistency in control cost estimates. *Id.* at 34749 n.21. But the Clean Air Act, the Regional Haze Rule, the BART Guidelines themselves, and the simple fact that different sources have vastly different designs belie EPA's preference for "consistency." Nowhere does the Act command national consistency in BART cost estimates. To the contrary, by allowing states to make individualized BART determinations, Congress demonstrated that consistency was not intended to be a component of the regional haze program, save for the uniform objective of attaining natural visibility conditions. The Regional Haze Rule takes the same approach, allowing states wide discretion to conduct BART analyses. And, finally, the BART Guidelines encourage states to take into account site-specific conditions that impact costs. In light of these authorities, EPA cannot disapprove the State's cost analyses simply because they do not fit within EPA's preferred vision of national uniformity.

Second, EPA claims Wyoming did not provide sufficient documentation of its costs. This claim is false. But even if it were true, data collection should precede EPA's decision. Rather than use this documentation claim as a basis to disapprove the SIP, EPA should have simply asked WDEQ for the documentation EPA seeks. Additional documentation supporting Wyoming's analysis will be provided as part of the comments from Wyoming sources.

C. EPA Inadequately Explains Its Reasons for Disapproving the State's Reasonable Progress Determinations.

EPA acknowledges that Wyoming evaluated the requisite four factors in its reasonable progress determinations. 78 Fed. Reg. at 34785. But, EPA asserts that Wyoming incorrectly calculated costs in those determinations. *Id.* EPA, however, does not explain how Wyoming incorrectly calculated costs. EPA asserts first that "EPA's rationale for disapproving the State's reasonable progress determination[s]...can be found in Section VIII.B of [the proposal]." *Id.* at 34763. Section VIII.B—the location of EPA's supposed "rationale"—only reiterates EPA's general allegation of "deficiencies in the control cost estimates." *Id.* at 34785. EPA therefore has not described with any meaningful degree of specificity the supposed errors that justify rejecting the State's reasonable progress determinations. EPA's failure to provide an intelligible justification for its action is unlawful and arbitrary, and precludes Wyoming from offering a more meaningful response.

IV. EPA's Proposed Action Unlawfully Tramples State Judicial Processes.

On May 28, 2009, WDEQ published its BART application analyses for the PacifiCorp and Basin Electric facilities subject to BART. WDEQ solicited public comments on the analyses and to that end held public hearings. EPA commented on WDEQ's analyses on August 3, 2009. EPA was fully aware of WDEQ's BART proposals. But, at that time EPA gave no indication that WDEQ's BART proposals violated the Clean Air Act or were unreasonable.

Both PacifiCorp and Basin Electric ultimately challenged WDEQ's BART determinations before the Wyoming Environmental Quality Council. *See* Appeal & Pet. for Review of BART Permits, *In re BART Permit Nos. MD-6040 and MD-6042*, No. 10-2801 (Wyo. Envtl. Quality Council Feb. 26, 2010) (PacifiCorp Petition); Appeal & Pet. for Review, *In re Basin Electric Power Coop.*, No. 10-2802 (Wyo. Envtl. Quality Council March 8, 2010) (Basin Petition). The Environmental Quality Council is an independent administrative body charged with adjudicating issues arising under Wyoming environmental law, including BART determinations. *See* Wyo. Stat. Ann. § 35-11-111, 112.

Both Basin Electric and PacifiCorp served their petitions for review on EPA Region 8. *See* Basin Petition at 8; PacifiCorp Petition at 18. EPA was again fully apprised

of WDEQ's final BART decisions, as well as the appeals of those decisions. EPA elected not to participate in those proceedings, and, again, provided no indication that EPA viewed WDEQ's BART decisions as invalid.

After filing motions for summary judgment, PacifiCorp and Basin Electric both ultimately settled their litigation with WDEQ. The Environmental Quality Council approved the settlements after providing an opportunity for public comment. EPA did not comment on the settlement agreements. Because no aggrieved person appealed the Council's decision approving the settlements, the permit decisions became final by operation of law. WDEQ therefore incorporated the BART permits into its SIP.

Years later, when EPA proposed action on Wyoming's SIP, EPA raised for the first time its disagreement with the BART decisions that PacifiCorp, Basin, and WDEQ had already litigated to conclusion. Because EPA had the opportunity to participate in the litigation and elected not to, EPA is now precluded from collaterally attacking those permit decisions. *See, e.g.*, *ADEC*, 540 U.S. at 490 n.14. To conclude otherwise—that EPA can forgo participation in state adjudications only to later attack the conclusions of those state processes—is to give EPA the power to nullify state court judgments. *Id.* at 1015 (Kennedy, J., dissenting). Congress did not intend to so empower EPA to turn federalism on its head through the regional haze program.

V. EPA's Proposed FIP Is Arbitrary, Capricious, and Contrary to Law.

While EPA chastises Wyoming for allegedly errors in its SIP, EPA own proposal is riddled with a series of mistakes. First, EPA's BART analyses ignore relevant data and fail to explain how EPA weighted the BART factors. Second, EPA omitted from its FIP the centerpiece of every regional haze implementation plan—reasonable progress goals. Third, EPA failed to follow the legal processes for promulgating its FIP. And, finally, EPA's cost calculations make several elementary errors. In light of these deficiencies, EPA should rescind its proposed FIP.

A. EPA's FIP BART Analyses Arbitrarily Ignore Relevant Data.

Wyoming based the cost component of its BART analyses on site-specific, engineered, vendor submitted bids for installing emission controls. *See, e.g.*, SIP Attachment A: BART Applications and Analyses: Basin Electric—Laramie River Station, AQD BART Application Analysis AP-6047, at 11, Tables 3-5 (May 28, 2009).

Wyoming calculated control capital costs that ranged from roughly $5 million to more than $120 million for each of the three units, along with annualized costs of $625,000 to nearly $16 million for each unit. *Id.* Basin Electric has submitted to EPA comments extensively explaining the bases for these cost estimates, including the substantial technical difficulty of installing SNCR and SCR at the Laramie River Station due to the design of the three units. EPA has to date disregarded the site specific cost estimates submitted for Laramie River Station and the other BART sources in Wyoming, alleging without any specificity that "Wyoming did not properly or reasonably 'take into consideration the costs of compliance.'" 78 Fed. Reg. 34776.

Instead of relying on the site specific costs, EPA relies on the IPM Model with retrofit factors adjusted on a source by source basis. *See* EPA's Revised Cost Analyses for Wyoming Sources, at 3 (Oct. 23, 2012). As EPA's consultant explains, "[t]he retrofit factor is a *subjective* factor used to account for the estimated difficulty of the retrofit that is unique to the facility." *Id.* (emphasis added). To calculate the subjective retrofit factor designed to account for the site-specific retrofit difficulties, neither EPA nor its consultant visited the sites. *Id.* Instead, EPA's consultant estimated the retrofit factor "from satellite images that provide some insight to the configuration of the units[.]" *Id.* Stated simply, EPA's consultant looked at Google Earth pictures to decide how much to adjust generic model costs to account for a source's site specific circumstances. *See, e.g.*, *id.* at 10.

At EPA's public hearing in Casper, Wyoming, on July 26, 2013, Basin Electric's consultant, Kenneth Snell, explained to EPA in detail how Google Earth images fail to reveal multiple conditions specific to Laramie River Station that make installing SCR far more expensive than EPA's consultant assumed. EPA's failure to rebut those positions is arbitrary. Moreover, EPA's methodology—relying on a subjective interpretation of Google Earth images—is itself arbitrary and capricious because it strains credulity to claim that one can assess retrofit costs by simply looking at hazy satellite pictures of a power plant.

B. EPA's FIP Is Arbitrary Because EPA Has Failed to Explain How It Weighed the BART Factors.

Based on the erroneous claims that the SIP incorrectly analyzed costs, calculated baseline NOx emissions, and modeled visibility improvement, EPA proposes a FIP for eight BART sources in Wyoming. 78 Fed. Reg. at 34750, 34773 (Dave Johnston Units 3

and 4, Naughton Units 1 and 2, Wyodak Unit 1, and Laramie River Station Units 1, 2, and 3). For each of these sources, EPA proposes to approve all of the State's BART NOx analyses, except for the cost of compliance, baseline emissions, and visibility factors. 78 Fed. Reg. at 34755. In other words, EPA approves the State's analyses of some BART factors, but not the others.

EPA, however, does not explain how it weighed the five BART factors after substituting its cost of compliance, baseline emissions, and visibility modeling for the State's. For example, for the Laramie River Station units, EPA reiterates its disagreement with the State's analyses and shows how its analyses change those factors. 78 Fed. Reg. 34776. But EPA does not explain how it analyzed those new factor conclusions in relation to the remaining Wyoming BART factors that EPA proposes to approve. *Id.* at 34777-77. For each of the eight BART units, EPA takes the same approach, failing to explain how it balanced the multiple BART factors. *See, e.g., id.* at 34781-83 (Naughton Units 1 and 2).

In total, EPA devotes less than four pages to its BART analysis for Laramie River Station. By contrast, the State's BART analyses for Laramie River Station covers fifty-two pages and explains in detail how the State balanced the BART factors to reach its BART determination. *See* SIP Attachment A: BART Applications and Analyses: Basin Electric—Laramie River Station, AQD BART Application Analysis AP-6047 (May 28, 2009).

The Act requires states, in the case of a SIP, and EPA, in the case of a FIP, "to *take into consideration* the costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology," when making a BART determination. 42 U.S.C. § 7491(g)(2) (emphasis added). The State thoroughly demonstrated how it considered and balanced these factors for each BART source. In its proposal, EPA has failed to show how it took these factors into consideration. That failure violates the Clean Air Act and is arbitrary and capricious.

C. EPA May Not Promulgate a FIP Without Reasonable Progress Goals.

The Regional Haze Rule clearly states that every implementation plan must include reasonable progress goals. 40 C.F.R. § 51.308(d)(1). Those goals must be

expressed in deciviews and must provide for visibility improvement on the most impaired days and no degradation on the least impaired days during the planning period. *Id.* In EPA's own words, reasonable progress goals are "[t]he vehicle for ensuring continuing progress towards achieving the natural visibility goal," 78 Fed. Reg. at 34743, which is the focal point of the regional haze program, *see* 42 U.S.C. § 7491(a)(1).

EPA proposes to disapprove the State's reasonable progress goals. 78 Fed. Reg. at 34767. In the same sentence, EPA claims to be proposing a FIP to replace those goals, which EPA asserts can be found in Section VIII.C of the notice. *Id.* Section VIII.C reveals, however, that EPA has in fact failed to establish replacement reasonable progress goals. *See id.* at 34788. EPA does not set forth reasonable progress goals in deciviews, nor does it provide for visibility improvement on the most impaired days with no degradation on the least impaired days. *See id.* Instead, EPA merely "anticipates" that its FIP would lead to improved visibility. *Id.* EPA's anticipation falls far short of the plain requirements of the Regional Haze Rule—concrete, deciview-based reasonable progress goals that provide for improved visibility on the worst days and no degradation on the best days. EPA's failure to establish reasonable progress goals to replace the SIP goals EPA proposes to disapprove is therefore unlawful.

EPA justifies its failure to establish the requisite reasonable progress goals by explaining that it "could not re-run the modeling due to time and resource constraints[.]" *Id.* This excuse stands in stark contrast to EPA's response to similar claims the State raised in the context of reasonable progress. For example, the State explained to EPA that the State could not complete its evaluation of the impacts to visibility from oil and gas sources until the Western Regional Air Partnership completes its emission inventory study. *Id.* at 34764-65. EPA responded that "If the State determined that additional information was need ... the State should have developed the information." *Id.* at 34765. Similarly, the State explained to EPA that it needed to conduct additional modeling before it could justify controls for the Mountain Cement kiln. *Id.* at 34765-66. Again setting forth its dual standard, EPA responded that "If the State determined that it needed to adopt a rule or perform modeling ... the State should have completed these steps before it submitted its regional haze SIP." *Id.* at 34766.

WDEQ encourages EPA to hold itself to the same standard it holds Wyoming. If EPA needs additional time and resources to conduct the modeling necessary to establish reasonable progress goals—an undeniably requisite component of every regional haze

implementation plan—it should complete these steps before deciding to impose a FIP on Wyoming.

D. EPA Invalidly Promulgated the FIP.

In two key respects, EPA failed to follow the processes that EPA is obligated to observe when developing its proposed FIP. First, EPA entirely failed to follow the land manager consultation requirements of Section 169A(d) of the Clean Air Act. And, second, EPA failed to comply with the public notice requirements of its own plan promulgation regulations. Both processes are centrally relevant to plan development, and had EPA not violated the law, EPA's proposed rule likely would have been different.

1. EPA Violated Section 169A(d).

Section 169A(d) of the Clean Air Act requires that before holding a hearing on a proposed regional haze plan, "the State (or the Administrator, in the case of a [FIP]), shall consult in person with the appropriate Federal land manager or managers and shall include a summary of the conclusions and recommendations of the Federal land managers in the notice to the public." 42 U.S.C. § 7491(d). In its proposed action, EPA recites this land manager consultation requirement as it applies to SIPs. 78 Fed. Reg. at 34744. But, EPA notably ignores that this requirement applies equally to FIPs.

Not once in any of EPA's public notices of the hearings EPA held on its proposed FIP did EPA "include a summary of the conclusions and recommendations of the Federal land managers in the notice to the public." *See* 78 Fed. Reg. 34738 (June 10, 2013); 78 Fed. Reg. 40654 (July 8, 2013). EPA cannot rely on the State's public notices because the State held its public hearings years before EPA proposed its FIP and because the SIP differs substantially from the FIP.

EPA's failure to comply with Section 169A(d) can be understood only as arbitrary and capricious. The Clean Air Act has required consultation with federal land managers, which oversee the Class I areas the regional haze program aims to protect, from the very beginning of the regional haze program, *see* 42 U.S.C. § 7491(a)(2), and continuously through the development of each implementation plan, *id.* § 7491(d). Congress therefore understood the importance of working closely with federal land managers in regional haze planning.

In 1999, EPA plainly understood the significance of consulting the federal land managers when it promulgated the Regional Haze Rule. *See* 64 Fed. Reg. 35714, 35747 (July 1, 1999) (describing land manager consultation as "important and necessary"). And both times EPA proposed action on Wyoming's SIP—in 2012 and again in 2013—EPA reiterated the need to consult with federal land managers when developing a regional haze implementation plan. 77 Fed. Reg. 33022, 33028 (June 4, 2012); 78 Fed. Reg. 34738, 34744-45 (June 10, 2013).

Against this backdrop, EPA's utter failure even to explain why EPA believed it did not have to consult with the land managers when promulgating its FIP for Wyoming, let alone comply with the simple consultation process set forth in Section 169A(d), is plainly arbitrary and capricious. Because federal land managers play a critical statutory role in the regional haze program, there is a substantial likelihood that EPA's proposed FIP would be significantly different if EPA had complied with Section 169A(d).

2. EPA Provided Inadequate Notice of Its FIP Hearings.

EPA's regional haze plan promulgation regulations require EPA to provide public notice at least thirty days in advance of a hearing on a proposed implementation plan. 40 C.F.R. § 51.102(d) (a plan hearing "will be held only after reasonable notice, which will be considered to include, at least 30 days prior to the hearing(s)"); *see also* 40 C.F.R. § 51.100(i). Although EPA held three public hearings on its proposed FIP for Wyoming, not once did EPA provide the public at least thirty days advance notice of the hearing.

EPA proposed its FIP on June 10, 2013 and provided only fourteen days notice of its hearing on the proposal. 78 Fed. Reg. 34738, 34738. After Governor Mead, Wyoming's Congressional Delegation, and WDEQ pointed out to EPA that fourteen days provided far too inadequate notice for the public to understand the proposed FIP and therefore meaningfully participate in the public hearing, EPA agreed to hold two additional hearings. On July 8, 2013, EPA publicly noticed its plans to hold the additional hearings on July 17, 2013 and July 26, 2013. 78 Fed. Reg. 40654, 40654. Thus, although EPA had the opportunity to correct its errors, it failed to do so by again providing less than thirty days notice of its hearings.

Here again, EPA's noncompliance with its own regulatory processes is arbitrary and capricious. EPA cannot ignore the law for its own benefit without at least providing a reasoned justification for doing so. In this case EPA has provided no such explanation,

thereby rendering its failure an arbitrary abuse of power. And by shortcutting public participation, EPA undermined the central democratic purposes of notice-and-comment rule-making. Had EPA honored the law and held itself to the same standards it holds states, the public could have more meaningfully commented on EPA's proposal. As a result of that public input, EPA's proposed FIP might be considerably different, assuming, as we must, that EPA would have considered those comments with an open mind.

WDEQ understands that EPA rushed its FIP promulgation process in order to meet the deadlines it consensually established with a third party in litigation to which Wyoming was not a party. But, EPA's outside arrangements do not excuse it from complying with the law, or allow it to shortcut public participation in the promulgation of a rule, especially one that will harm Wyoming.

WDEQ discourages EPA from imposing its illegally promulgated FIP on Wyoming. But, in the event EPA decides nevertheless to do so, WDEQ encourages EPA to repropose its FIP in a manner that complies with the statutory and regulatory plan development processes. To do otherwise is to arbitrarily hold states to a different plan promulgation standard than EPA itself adheres to, even though the Clean Air Act makes no such distinction. Such irrationally unequal treatment is the essence of arbitrary regulation.

E. EPA Erroneously Calculated Urea Costs.

EPA commits two fundamental and significant errors in its calculation of urea costs. The effect of these simple mistakes is to overstate the costs of SNCR. The overstatement of SNCR costs, in turn, justifies EPA's ultimate conclusion that SCR is cost effective.

First, EPA mistakenly converts pounds to tons in its calculation of operation and maintenance costs for urea. *See* EPA's Revised Cost Analyses for Jim Bridger Units 1-4 – Detailed Spreadsheet Supporting Analyses (NOx-SNCR tab, rows 62-64) (Bridger Costs); EPA's Revised Cost Analyses for Wyoming Sources – Detailed Spreadsheet Supporting Analyses (NOx-SNCR_01_03 tab, rows 62-64) (EPA Costs). The cost formula multiplies the urea rate (pounds/hour) times the cost (dollars/ton) and divides that product by the source's megawatt rating to yield a dollar per megawatt hour cost for

urea. In converting pounds to tons, EPA mistakenly divides by 1,000, when it should have divided by 2,000 (the number of pounds in a ton).

Second, EPA incorrectly calculated the water dilution variable for operation and maintenance costs in urea. *See* Bridger Costs (NOx-SNCR tab, rows 62-64); EPA Costs (NOx-SNCR_01_03 tab, rows 62-64). EPA's cost calculation incorporates the wrong spreadsheet cell (auxiliary power cost). It should have instead incorporated spreadsheet cell for the hourly water rate in thousands of gallons per hour.

VI. EPA Should Approve Wyoming's BART Determinations and Long-Term Strategy for Jim Bridger Units 1 and 2.

EPA proposes that Wyoming's determination of NOx BART for Jim Bridger units 1 and 2 as new LNB plus OFA is reasonable and that it would be unreasonable of the EPA to require any further retrofits at these units within five years of EPA's final action. 78 Fed. Reg. at 34756. The State supports EPA's proposed approval of NOx BART as LNB plus OFA for Jim Bridger units 1 and 2.

EPA also proposes to approve the State's long-term strategy (LTS) of NOx control for Jim Bridger units 1 and 2 as the SCR-based emission rate of 0.07 lb/MMBtu with compliance dates of December 31, 2021 for Unit 2 and December 31, 2022 for Unit 1. 78 Fed. Reg. at 34756. Based on facts PacifiCorp raised concerning the additional requirements in the proposed FIP for Wyoming, the finalized FIP for Arizona, and the possibility of additional requirements in a future FIP or SIP for Utah, the additional time allowed PacifiCorp to install controls under the State's LTS on Jim Bridger Units 1 and 2 is warranted under the affordability provisions in the BART Guidelines. 40 C.F.R. pt. 50, App. Y, § IV(E)(3); *see also* 78 Fed. Reg. at 34756. Wyoming therefore supports EPA's proposed approval.

Wyoming also appreciates EPA's limited acknowledgement of State expertise when EPA "determined it is appropriate to give considerable deference to the State's conclusions about what controls are reasonable and when they should be implemented." 78 Fed. Reg. 34756. Wyoming strongly urges EPA to stand by its proposed approval of Wyoming's Regional Haze Plan requiring Jim Bridger Unit 1 to meet the 0.07 lb/MMBtu emission rate prior to December 31, 2021 and Unit 2 to meet the 0.07 lb/MMBtu emission rate prior to December 31, 2022. However, Wyoming encourages EPA to approve Wyoming's LTS for Jim Bridger Units 1 and 2 as submitted, rather than approve

only the SCR portion, in order to preserve future flexibility for ensuring adequate emission controls.

VII. Conversion of Naughton Unit 3 from a Coal Fired EGU to a Natural Gas Fired One Is Not BART.

EPA requested additional information on the conversion of Naughton Unit 3 from a coal fired unit to a natural gas fired unit. 78 Fed. Reg. at 34760. EPA must evaluate PacifiCorp's fuel conversion in accordance with Appendix Y as a "better-than-BART" alternative and not as a BART control technology option because EPA had made clear in its BART Guidance that "it is not [EPA's] intent to direct States to switch fuel forms, *e.g.* from coal to gas," as part of the BART analysis. 70 Fed. Reg. 39104, 39164 (July 6, 2005).

PacifiCorp submitted to WDEQ a voluntary application for the conversion of the unit to a natural gas one. 78 Fed. Reg. at 34760 n.38. WDEQ performed a New Source Review analysis of the application and published the analysis for comment on May 16, 2013. In accordance with the Wyoming Air Quality Standards and Regulations, the WDEQ afforded the public thirty days to submit comments on the application and analysis. After responding to each comment, WDEQ issued Air Quality permit MD-14506 to PacifiCorp on July 5, 2013. While PacifiCorp voluntarily submitted its permit application to convert Naught Unit 3 to natural gas, the WDEQ issued a federally enforceable permit requiring such conversion. Compliance with the permit is therefore not voluntary.

The permitted NOx performance level of Naughton Unit 3 after conversion to natural gas is 0.08 lb/MMBtu based on a 30-day rolling average and not 0.10 lb/MMBtu based on a 30-day rolling average as stated in PacifiCorp's permit application. Additionally, the permitted NOx mass emission rate is 250 lb/hr based on a 30-day rolling average, which is protective of visibility and lower than the BART-determined NOx rate of 259 lb/hr based on the same averaging period. Finally, annual NOx emissions will be reduced from the BART level of 1,134 tons to 519 tons.

VIII. EPA Should Approve Wyoming's Reasonable Progress Determinations for Oil and Gas Sources.

EPA proposes to approve Wyoming's reasonable progress determinations for oil and gas sources. 78 Fed. Reg. at 34765. However, EPA states that it "disagree[s] with the State's reasoning for not adopting reasonable progress controls for oil and gas sources." *Id.* Wyoming explained in its SIP that it required additional information before it can determine whether and to what extent additional controls are necessary for oil and gas sources. *Id.* EPA thinks Wyoming should have obtained the additional information before submitting its SIP, though, as already explained, EPA does not hold itself to this same standard. Nonetheless, EPA has previously recognized Wyoming's expertise and leadership in regulating the air quality impacts of oil and gas development. 76 Fed. 52738, 52757 (Aug. 23, 2011). In light of Wyoming's leadership in regulating air pollution from oil and gas development, EPA should approve Wyoming's reasonable progress determination for oil and gas sources.

IX. Wyoming Will Revise the Reporting, Recordkeeping, Monitoring, and RAVI Portions of Its SIP.

EPA has proposed to disapprove the monitoring, recordkeeping, reporting, and RAVI portions of Wyoming's SIP. 78 Fed. Reg. at 34788. Wyoming acknowledges these deficiencies in its SIP and commits to making the necessary revisions. However, Wyoming will revise its SIP in a manner that comports with statutory and regulatory processes. Unlike EPA, Wyoming will not shortcut legal processes designed to ensure federal land manager consultation and public participation to meet an arbitrary deadline EPA has established with special interest groups in litigation to which Wyoming was not a party. Such arbitrary deadlines defeat the cooperative federalism Congress intended to guide Clean Air Act implementation by needlessly expediting the process, tying EPA's hands, and precluding the State from an opportunity to revise its SIP. In this context, EPA's promise—to "propose approval of a SIP revision as expeditiously as practicable if the State submits such a revision and the revision matches the terms of our proposed FIP," *id.* 34738—rings hollow.

X. Conclusion

WDEQ strongly disagrees not only with the substance of EPA's proposal, but also with the path EPA took to get here. EPA's proposal upsets a long history of cooperation

between EPA and WDEQ. EPA's justifications for doing so are unlawful and arbitrary. I therefore encourage EPA to approve Wyoming's BART and reasonable progress determinations and to withdraw EPA's proposed FIP for BART and reasonable progress.

Sincerely,

Todd Parfitt
Director

Cc: Governor Matt Mead
Senator John Barrasso
Senator Mike Enzi
Representative Cynthia Lummis
Wyoming Legislative Service Office